AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1.   (currently amended) A method for generating a halftone image comprising:

choosing a set of allowed colors;

processing a color value;

quantizing said processed color value in a distorted device independent color space according to said set of allowed colors;

diffusing quantization errors in device dependent color space;

outputting a halftone pixel according to said quantizing step and;

weighting said distorted device independent color space to discourage luminance fluctuations.

2.   (original) A method according to Claim 1 wherein, said distorted color space is CIELab colorspace.

3.   (original) A method according to Claim 1 wherein, said output pixel is a CMYK halftone pixel.

4.   (original) A method according to Claim 1 wherein, said set of allowed colors corresponds a given tone of said device dependent colorspace.

5.   (original) A method according to Claim 1 wherein, said output pixel is a RGB halftone pixel.

6.   (original) A method according to Claim 1 wherein, a look up table is used to compute said quantization step.

7-11. (cancelled)

12.   (currently amended) A method for generating a halftone image comprising:

choosing a set of allowed colors;

processing a color value;

quantizing said processed color value in a distorted device independent color space according to said set of allowed colors;

diffusing quantization errors in device dependent color space;

outputting clustered halftone pixels according to said quantizing step wherein said output is feedback to said quantizing step.

13.   (cancelled)

14.   (currently amended) An apparatus for generating a halftone image comprising:

a chooser for choosing a set of allowed colors;

a processor for processing a color value;

a quantizer for quantizing said processed color value in a distorted device independent color space according to said set of allowed colors;

a diffuser to diffuse quantization errors;

a weighter for weighting said distorted device independent color space for reducing luminance fluctuations; and

an output device for outputting a halftone pixel according to said quantizing step.

15.   (original) An apparatus according to Claim 14 wherein, a look up table is used for quantizing said color value.

16.   (original) An apparatus according to Claim 14 wherein, said distorted color space is CIELab colorspace.

17.   (original) An apparatus according to Claim 14 wherein, said output pixel is a CMYK halftone pixel.

18.   (original) An apparatus according to Claim 14 wherein, said set of allowed colors corresponds to a given tone of said device dependent color space.